

THE ENVIRONMENTORS PROGRAM: AN OUTREACH PROGRAM FOR HIGH SCHOOL STUDENTS

Erin Clark

AUTHOR: Erin Clark, Biological Technician, U.S. Fish and Wildlife Service, 380 Meigs Street, Athens, GA 30601

REFERENCES: *Proceedings of the 1999 Georgia Water Resources Conference*, held March 30-31 at the University of Georgia, Kathryn J Hatcher, editor, Institute of Ecology, The University of Georgia, Athens, Georgia.

ABSTRACT. The Environmentors program is an outreach initiative sponsored by the U.S. Fish and Wildlife Service in cooperation with the University of Georgia Warnell School of Forest Resources, Georgia Project Learning Tree, Georgia Adopt-A-Stream, Clarke Central High School and Athens Boys and Girls Club. The program is designed to involve high school students in their community and provide experiential learning in natural resources. These students are trained to monitor water quality using wet chemistry kits and mentor to younger children using two nationally recognized environmental curricula, Project Learning Tree (PLT) and Project WILD. The program provides an opportunity for mentoring and cooperative learning on all educational levels, while increasing environmental awareness and interest in natural resource management.

The students of Clarke Central High School will study an impacted stream in Athens, Georgia throughout the year. The students will assess water quality and compare information with other Adopt-A-Stream groups throughout the state. Students in the Warnell School of Forest Resources will provide technical assistance and provide one outlet for information-sharing with the students in the program. Future plans for the program include training in and use of Project WET activities, as well as additional training in water quality analysis and laboratory procedures and planning for rehabilitation of the impacted stream.

PROGRAM MISSION

The mission of the Environmentors program is to enhance the quality of aquatic environments and develop a mentor program through cooperative partnerships. The program involves volunteers at all levels including natural resource professionals, state and federal government, university faculty and students, and local school district employees and students. Each group contributes significantly to the program and, in return gains valuable experience and information from the others.

PROGRAM OBJECTIVES

The Environmentors will increase their awareness and understanding of environmental issues, self-confidence and sense of connection to their community. Upon completion, Environmentors will have a greater understanding of how differing and sometimes conflicting perspectives contribute to trends or beliefs in natural resource management. Participants will demonstrate their increased awareness and understanding of important natural resource issues, increased knowledge of community and age-related perspectives, and heightened responsibility for involvement of the community in resources management and stewardship.

PROGRAM DESCRIPTION

Environmentors, now in its pilot year, involves the investigation of issues related to water resources through hands-on field experience. Clarke Central high school students use Adopt-A-Stream guidelines and training to evaluate long-term changes in the water quality, physical conditions and invertebrate diversity at selected sites along streams in Clarke County, Georgia. The program also involves the use of Project Learning Tree, Project WILD and in the future Project WET to educate elementary-aged children in the community about the environment.

Georgia Adopt-A-Stream, under the auspices of Georgia Environmental Protection Division (GAEPD), is a stream preservation effort that utilizes trained volunteers to conduct monitoring. All participating Environmentors students undergo Adopt-A-Stream volunteer training and are expected to take part in a stream monitoring study. Chemical monitoring involves the use of wet chemistry kits (LaMotte), on a biweekly basis, to monitor trends in chemical composition of stream water at different sampling points along a selected waterway. Biological monitoring is also done and involves the sampling of the aquatic invertebrate population to determine the overall health of the stream. Students will use an Imhoff cone to monitor sediment loads,

as sedimentation is threatening increasingly greater numbers of North Georgia streams. Monitoring of the conditions adjacent to and activity upstream of monitoring sites will also be recorded. Students at the Warnell School of Forest Resources at the University of Georgia will assist with the data collection and analysis. University faculty and students, US Environmental Protection Agency (USEPA) and GAEPD may also be called upon to provide technical assistance. Data sets and summaries will be shared with the local government, partnering agencies and organizations and placed in the Adopt-A-Stream database.

The infusion of environmental curricula are components of the Environmentors program. The program is founded on both hands-on involvement and heads-on experience in natural resource issues. The heads-on component involves the use of environmental education to both understand issues and gain perspective on how issues are understood, deliberated and settled. Furthermore, an environmental curriculum provides the students with the teaching tools necessary to assist others in the community in understanding these issues, while contributing to the creation of a network for the conservation natural resources. The environmental education component utilizes nationally recognized teaching materials and includes: Project Learning Tree (PLT); Project WILD; and Project WET. Students in the Environmentors program are trained to use the guides of both Project Learning Tree and Project WILD. In the future, Project WET training will also be required. The Project Learning Tree guide, published by the American Forest Foundation, is accessed in the state of Georgia through the Georgia Forestry Commission. PLT teaches educators to use the activities provided to help students explore environmental issues through interdisciplinary, hands-on activities. PLT activities also promote competent and informed choices among students (Iozzi in PLT, 1996). PLT focuses on giving students the skills, comprehension, awareness, appreciation and commitment to deal with environmental issues (PLT, 1996). Project WILD is co-sponsored by the Western Association of Fish and Wildlife Agencies and the Council for Environmental Education.

"The goal of Project WILD is to assist learners of any age in developing awareness, knowledge, skills and commitment to result in informed decisions, responsible behavior and constructive actions concerning wildlife and the environment upon which all life depends (Project WILD, 1992)."

As a supplement to these activities, trained Project WILD educators at the University level accompany students to activities and may use live animals on occasion to help the younger students visualize concepts or increase awareness. Project WET (Water Education for Teachers) by The Watercourse and the Council for Environmental Education is designed to "facilitate and promote awareness, appreciation, knowledge of water resources..." Project WET may be added to training workshops required for program participants as early as Fall 1999. Project WET may also be used on

occasion to facilitate discussions between high school students and university students, promoting information-sharing and cooperative efforts related to streams (Project WET, 1998).

PARTICIPANTS AND SPONSORS

The Environmentors program is sponsored by the U.S. Fish and Wildlife Service in partnership with The University of Georgia, Georgia Forestry Commission, Georgia Department of Natural Resources, Clarke Central High School, Athens Boys and Girls Club and others.

FUTURE PLANS

Although still in its pilot year, the Environmentors program has generated many ideas for future efforts. The addition of Project WET curriculum to the arsenal of environmental education tools used by the students will expand activity diversity and allow the Environmentors the flexibility to serve a more eclectic audience. The cooperation with hydrology, forestry, fisheries, and wildlife students at the University of Georgia will bring technical assistance and unique field experience to the program. On the issue of stream monitoring, partnering possibilities with a local water quality laboratory will be explored for interested Environmentors. Also, after a long-term study has been conducted, plans for remediation of the stream may be explored. Goals of this effort would be to help the students go beyond identification of damage to water resources and identify solutions and remedies.

CONCLUSIONS

The Environmentors program provides services to the community in the form of environmental education and water resources investigation. More importantly it provides participants connections and creates a network to promote responsible use and stewardship of natural resources in a community.

LITERATURE CITED

- American Forest Foundation, 1996. Project Learning Tree Environmental Education Pre K-8 Activity Guide. pp. iv-vii.
- Council for Environmental Education, 1992. Project WILD K-8 Activity Guide. 386 pp.
- The Watercourse and the Council for Environmental Education, 1998. Project WET Curriculum & Activity Guide. 516 pp.